Forecast and Modeling Meeting

Maryland Public Health Strategy for Climate Change

Clifford S. Mitchell, MS, MD, MPH
Director, Environmental Health Bureau
Prevention and Health Promotion Administration

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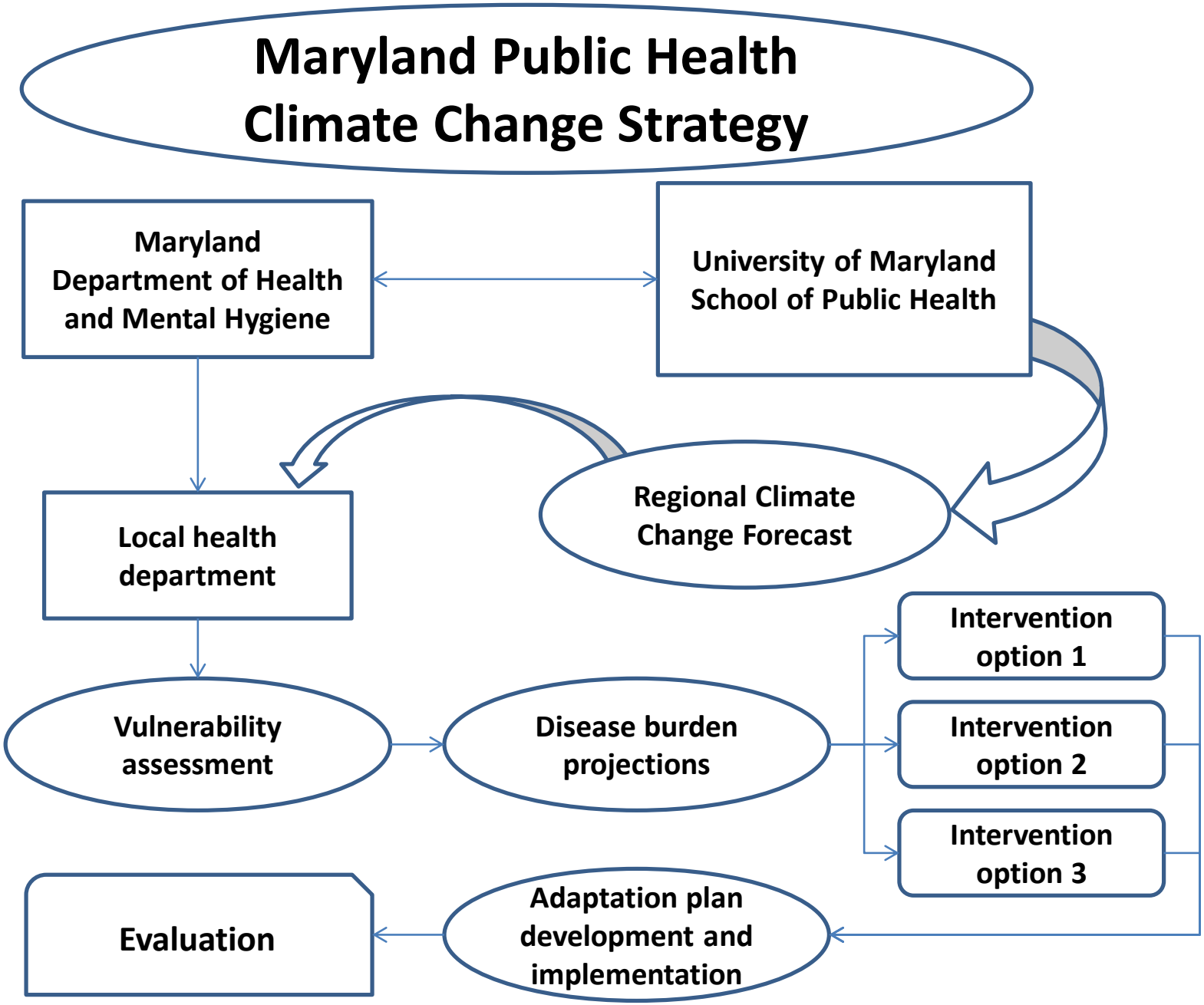
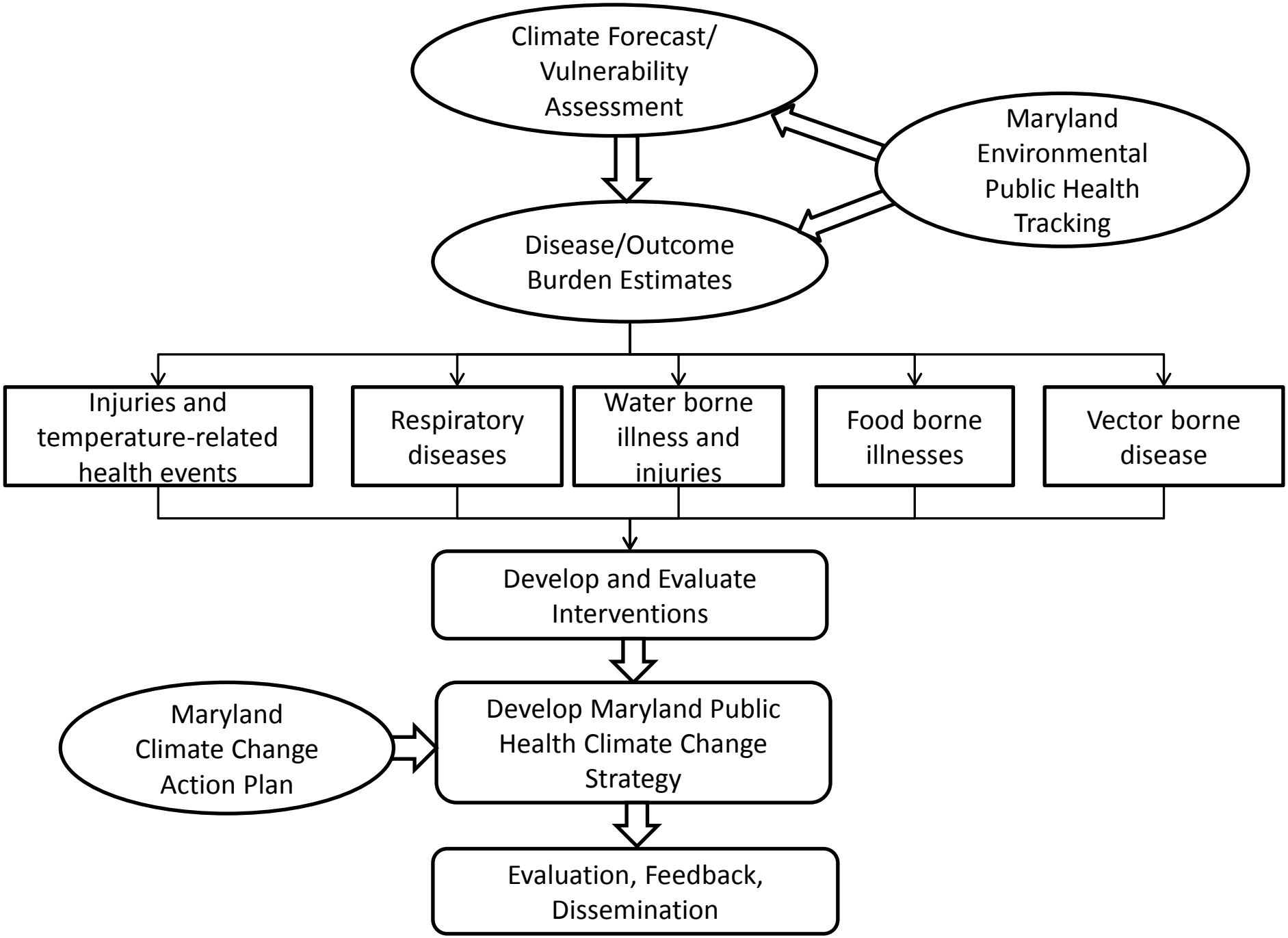
Washington, DC

Maryland Public Health Strategy for Climate Change

- Based on CDC BRACE framework (building resistance against climate effects)
- 4 year cooperative agreement
- Also operates within context of Maryland Climate Change Action Plan


Maryland Public Health Climate Change Strategy
Maryland Department of Health and Mental Hygiene
University of Maryland School of Public Health
Regional Climate Change Forecast
Local health department
Vulnerability assessment
Disease burden projections
Intervention option 1
Intervention option 2
Intervention option 3
Adaptation plan development and implementation
Evaluation


Climate Forecast/ Vulnerability Assessment
Maryland Environmental Public Health Tracking
Disease/Outcome Burden Estimates
Injuries and temperature-related health events
Respiratory diseases
Water borne illness and injuries
Food borne illnesses
Vector borne disease
Develop and Evaluate Interventions
Maryland Climate Change Action Plan
Develop Maryland Public Health Climate Change Strategy
Evaluation, Feedback, Dissemination

Actions to Date

- Organizational – MOU with University of Maryland College Park
- Stakeholders Meeting, November, 2012
- Survey

Survey of Maryland Residents on Climate Change

- Initiative of George Mason University, Maryland Climate Change Consortium
- Survey of 6,400 randomly selected Maryland residences
- Knowledge and attitudes regarding climate change and public health, alternative energy, hydraulic fracturing, and other public health issues
- Done in 2013 – results available to provide guidance to public health efforts

Outcomes of the Chesapeake Bay Workshop

Integrating Climate and Environmental Information with Disease Surveillance to Address Pathogens and Algal Toxins of Concern to Public Health

March 21-22, 2012

Seattle, WA

Human Health

- Better clinical information on disease susceptibility/dose response
- Cases are infrequent; question as to whether the events can be modeled/predicted or are truly stochastic
- Need exposure markers for HABs; virulence factors for *Vibrios*

Scaling Forecasts

- Both MD and WA can respond within 12 hours of adverse weather or disease reports for individual shellfish grounds, suggesting these set the minimum scales for prediction
- Forecasts at longer and broader scales could allow for “priming the pumps” that may include initiating empirical sampling programs or stakeholder educational initiatives
- Possible role after HAB or pathogen outbreaks by shortening periods of closure of shellfish grounds, or lack of recreational access
- Current empirical platform for forecasting is spatially and temporally coarse. Continuous monitoring of physical variables has changed our understanding of hypoxia and may produce similar impacts for HABs and pathogenic organisms.

Harmful Algal Blooms

(and Global Climate Change)

Tracking in Action

September, 2011

Issues

- Definition of a “bloom event” for regulatory, scientific purposes
- When is the bloom event an event?
- Distinction between drinking water events, recreational water events
- Treatment for drinking water probably effective in most cases, but there are reasons to monitor